2021

A COMPARATIVE STUDY OF STRESS, TRAUMA, WELL-BEING, AND FUTURE ORIENTATION AMONG COMMUNITY COLLEGE STUDENTS

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Digital Object Identifier: https://doi.org/10.13023/etd.2021.405

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THESIS

A thesis submitted in partial fulfillment of the
requirements for the degree of Master of Science in the
Family Sciences in the College of Agriculture, Food and Environment
at the University of Kentucky

By

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Lexington, Kentucky

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Lexington, Kentucky

2021

ABSTRACT OF THESIS

A Comparative Study of Stress, Trauma, Well-being, and Future Orientation Among Community College Students

This study measured perceived stress, past trauma, well-being, and future orientation in a sample of community college students located in the Southeast United States. The sample included 412 participants (78% female); 59% of study participants reported living in a rural community and 41% in a non-rural community. Over 2/3 of the sample reported their age as 22 years. Framed by Family Stress Theory and Human Ecological Systems Theory, the study tested whether rural college students would report higher levels of stress, more past trauma, lower well-being and future orientation when compared with non-rural students. In addition, the same set of questions was tested by sex, first-generation college student status, ethnicity/race, and income. The study findings suggest that rurality has no association with stress, well-being, past trauma, or future hopes and fears. However, the evidence did show that SES or income was associated with stress, past trauma, and well-being. Low-income students reported more frustrations and higher behavioral as well as physiological reactions. They experienced more emotional abuse and neglect, sexual abuse, and higher physical abuse than their peers. They also had lower well-being and higher depression than higher income students. Being female and a first-generation college student also increased the likelihood of having higher stress and having experienced more past trauma.

KEYWORDS: Stress, Trauma, Well-being, Future-orientation, College Student

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November 15, 2021

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ACKNOWLEDGEMENTS

The completion of this Thesis would not have been possible without the guidance and support of my Thesis Chair, Dr. Alexander Vazsonyi. His expertise and patient instruction have been invaluable throughout this process. I would like to also thank my Thesis Committee, Dr. John Yozwiak and Dr. Bruce Ross for providing helpful feedback that greatly improved the finished product.

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A Comparative Study of Stress, Trauma, Future Orientation, and Well-being Among Community College Students

Attending college may be a positive experience for most students, but for others it can be a difficult process, as well as transition. Some students experience a variety of stressors, including academic pressures which can lead to adverse wellness (Ratanasiripong, Sverduk, Hayashino, & Prince, 2010). Roughly 48% of college students reported moderate to serious psychological distress (American College Health Association, 2021). In addition to stress, some students have experienced past trauma which can also negatively impact these outcomes (Lanius et. al., 2010).

Having a college degree tends to positively affect economic outcomes. Those with a college degree are more likely to be employed full-time and are less likely to be unemployed, as compared to their peers without a college degree (Pew Research Center, 2014). However, the cost of higher education has increased nearly 500% since 1985 (National Center for Education Statistics, 2019). The rising cost of higher education has created additional challenges for low-income students. While tuition at community colleges has increased, it still remains lower than four-year colleges and universities (National Center for Education Statistics, 2019). Community college campuses are also widespread, making them more accessible to students in rural areas. A study using nationwide data from the Rural High School Aspirations Study found that 64.5% of rural youth attend community colleges at some point in their higher education career (Byun, Meece, & Agger, 2017).

Despite the rising cost of higher education, colleges and universities have reported increased enrollments. According to the National Center for Educational Statistics (2019), from 2007 to 2017, college enrollment increased 15%. Along with higher enrollments, college staff have also reported a greater number of students with

mental health challenges (American College Health Association, 2006). Stress management is the most common issue that students seek help with (Reynolds, 2013). In addition to stress, and perhaps associated with stress, 40 percent of community college students aged 18-24 reported being depressed while 33 percent reported having experienced anxiety (Eisenberg & Goldrick-Rab, 2016).

An additional source contributing to mental health challenges among community college students includes previously experienced trauma. Trauma has been described as the psychological effect that occurs as a result of a distressing experience (Bokanowski, 2005). Some experiences that may be considered traumatic include crime related trauma, physical trauma, emotional trauma, and sexual assault. Childhood trauma can include neglect, loss of a caregiver, physical and emotional abuse, and sexual abuse. Post-Traumatic Stress Disorder (PTSD) is a serious trauma related disorder that can negatively affect an individual's mental and physical health, which can lead to poor academic performance (Lee, Wuertz, Rogers & Chen, 2013). According to the Fourth National Incidence Study of Child Abuse and Neglect (2010) report, rural children are twice as likely to have experienced most forms of abuse, including sexual and emotional abuse than their metro peers. Thus, it was expected in the current study that rural college students, particularly first generation college students, would have experienced significantly more trauma in comparison to non-rural students. The same was true for first generation college students as the evidence suggests that they have experienced more PTSD and report lower life satisfaction in comparison to non-first generation students, based on previous research (Jenkins, Belanger, Conally, Boals, & Duron, 2013).

The current study measured perceived stress, past trauma, well-being and future orientation of community college students attending community college. The study tested these variables effects by rural versus non-rural, sex, first generation student

status, race, and socioeconomic status (SES). The following review of literature focuses on the conceptual framework underlying the current investigation, namely Family Stress Theory and the Human Ecological Theory. Using these perspectives, the review then covers the effects of stress, the consequences of trauma, well-being, and future orientation. The review concludes with limitations of previous studies.

Literature Review

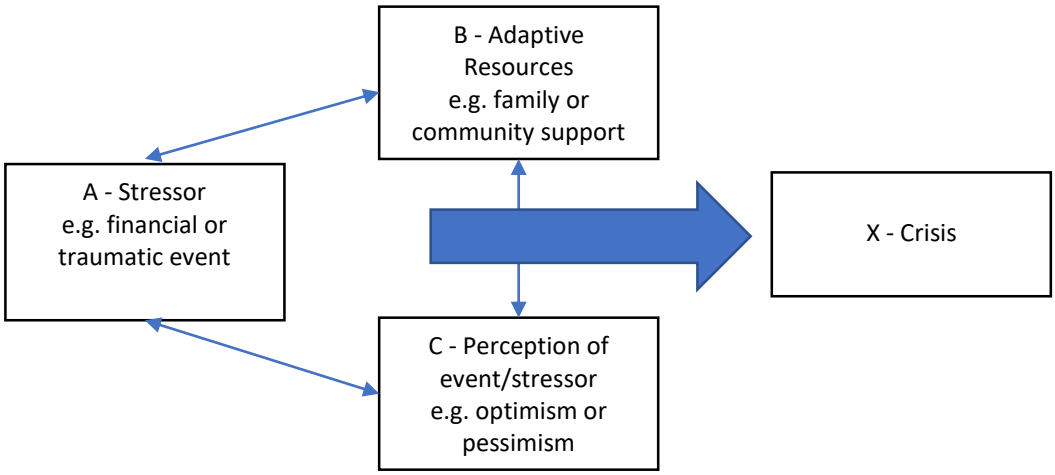
Theoretical Background

The current study used elements of Family Stress Theory as well as Human Ecological Theory to guide and frame the research. To better understand stress in families, Ruben Hill (1949) developed the ABC-X family stress model which consists of a stressor (A), resources available (B), perception of the stressor (C), and possibility of crisis (X). The resources available (B) and a family's perception about the stressor (C) determine whether a crisis will occur (X). Stress pileup occurs when multiple stressors are happening at the same time but coping strategies prevent a stressor or multiple stressors from becoming a crisis (Smith & Hamon, 2012). Some stress is beneficial and can even foster resiliency (Seery, Holman, & Silver, 2010). For example, stress can motivate a student to study longer to be better prepared for a test. However, stress becomes problematic when it overwhelms coping defenses and becomes unmanageable (Seery, Holman, & Silver, 2010). Based on the model, families that adequately evaluate a stressor and then respond with effective coping strategies, can prevent a crisis (Smith & Hamon, 2012). The family stress model helps to provide a better understanding the extent to which adverse family background and stressors, including psychological or physical trauma and persistent poverty, leads to what could be considered adaptive or maladaptive adjustment outcomes; in the current study, the extent to which these adverse events impact college age youth, their ability to successfully adapt to the challenges of college, depends on their perceptions of these

stressors as well as supportive processes provided by the family or the larger community.

ABC-X Family Stress Model

Figure 1: ABC-X Family Stress Model, adapted from Hill (1949) and applied to stress in community college student families.

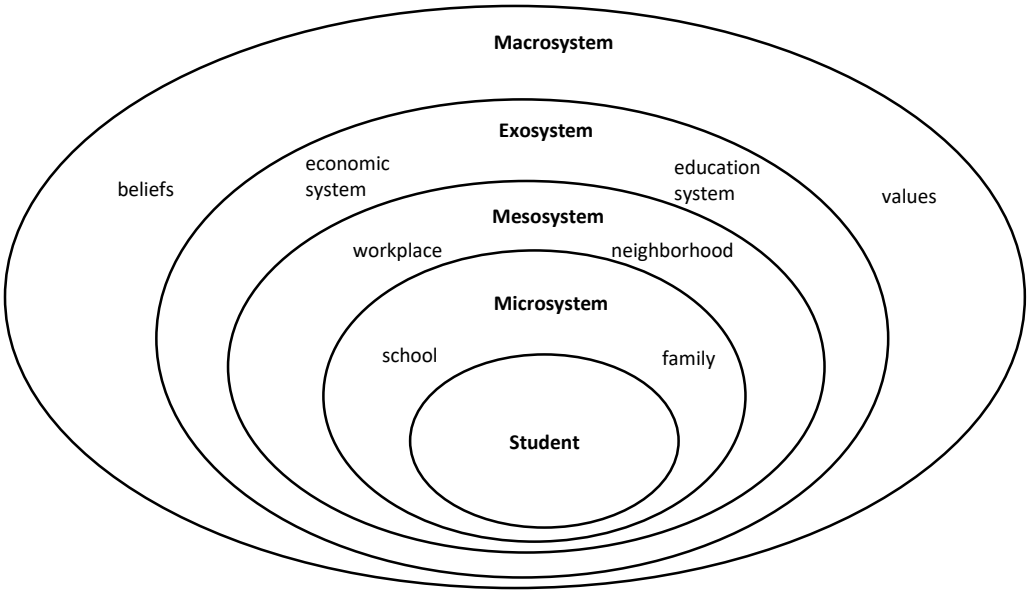


On the other hand, Human Ecological Theory posits that individuals are part of a large system of interrelated processes and sub-systems, namely the microsystem, mesosystem, exosystem, and the macrosystem (Bronfenbrenner, 1979). The microsystem consists of ones' immediate environment, such as family and school. Unfortunately, some students live in areas with high poverty which has been associated with poor performing public schools (Hegedus, 2018). These additional systemic processes and challenges make it difficult for rural students to succeed later in college. The mesosystem is the interactions within the microsystems which can positively or negatively influence adaptive functioning. The exosystem is made up of institutions and agencies that are indirectly influences. And finally, the macrosystem consists of the customs, attitudes, values, and laws of a culture (Bronfenbrenner, 1979). Thus, the model provides an explanatory heuristic of how different systems of influence impact the developing individual, how the family or neighborhood support or prevent children and

youth from coping and succeeding in the face of adversity, such as trauma or persistent poverty and associated “blocked” access, but also how larger systemic process, such as the quality of the local schools, access to educational or recreational resources support or impede coping and thriving of these individuals.

Ecological Systems Model

Figure 2: Bronfenbrenner’s (1979) ecological systems theory applied to community college students.



Effects of Stress

Stress is a major concern for many college students. Research conducted by Brougham, Zail, Mendoza, and Miller (2009) found that stress and coping methods varies by sex. Women reported having higher overall stress and were more likely to use emotion-focused coping than men (Brougham et al. 2009). Women also tend to report being more stressed than men, despite having more social support (Jenkins, Belanger, Conally, Boals, & Duron, 2013). A national college student survey by the American

College Health Association (2018) found that women reported being more stressed than men (ACHA, 2018). Stress has been shown to have a profound impact on academic performance while academic demand has been shown to contribute to higher stress (ACHA, 2018; Kumaraswamy, 2012). A correlation was found between financial stress relating to affording college and being non-Caucasian (Brougham et. al. 2009).

Stress can also negatively affect an individual's mental and physical health which can lead to poor academic performance (Lee, Wuertz, Rogers & Chen, 2013). Low income students who experience food insecurity are twice as likely to experience high levels of stress and depression compared to their peers (Bruening, Woerden, Todd, & Laska, 2018). Students from rural areas, like Appalachia, can have difficulty adjusting to the college environment and balancing class work and family obligations (Gore & Wilburn, 2010; Holley & Gardner, 2012). According to family stress theory, when several stressors are happening at the same time, a pileup occurs (Smith & Hammon, 2012). Family resources, such as coping strategies can help protect against a stressor or multiple stressors from turning into a crisis (Smith & Hammon, 2012). Levens, Elrahal, and Sagui (2016) found that family emotional support served as a protective factor in preventing low perceived stress reactivity from leading to depressive symptoms. Student stress has also been found to affect sense of coherence, or the coping capacity to handle everyday life stressors, with emotional health being more likely to affect sense of coherence among females, and family relationships having the most effect on sense of coherence among males (Darling, McWey, Howard, & Olmstead, 2007).

From an ecological perspective, family support, in the form of family resiliency is important for child outcomes. Positive outcome predictors for children from low-income families include high communication, social support, and problem-solving skills (Orthner, Jones-Sanpei, & Williamson, 2004). These protective factors which are acquired early in life may help students adapt more easily to the college environment.

Consequences of Trauma

Trauma that may occur in childhood includes neglect, loss of a caregiver, physical and emotional abuse, and sexual abuse. Trauma exposure may lead to feelings of loneliness among college students (Zeligman, Varney, Gheesling, & Placeres, 2019).

Sometimes trauma can lead to Posttraumatic Stress Disorder. Having a negative perception about self has been found to be the strongest predictor of severity of trauma-related PTSD (Moser, Hajcak, Simons, & Foa, 2007). First-year trauma-exposed African American females with high levels of PTSD symptoms were at an increased risk of dropping out of college, prior to the end of the 2nd year (Boyraz, Owens, Horne, & Armstrong, 2013). However, PTSD symptoms were not significantly associated with academic achievement or persistence for males (Boyraz et al., 2013). For trauma-exposed African American females, low high school GPA and attending a predominantly white college, were risk factors for low academic achievement and dropping out (Boyraz et al., 2013). In a study by Frazier et. al. (2009) 85% of students reported having experienced at least one traumatic event in their lifetime. Results of the same study found that sexual assault was the most likely event to lead to PTSD (Frazier et. al., 2009).

Well-being and Future Orientation

Well-being has been described as an individual's wellness or happiness (Galinha & Pais-Ribeiro, 2011). Seligman (2018) identified five measurable elements of well-being; Positive emotion, Engagement, Relationships, Meaning, and Accomplishment (PERMA). Some researchers studying well-being seek to identify predictors of happiness (Galinha & Pais-Ribeiro, 2011). Bazargan-Hejazi et. al. (2021) found that having a hopeful, optimistic, and grateful attitude about the future significantly improved all domains of well-being among college students.

Future Orientation is the view an individual has about the future (Arnett, 2000). According to Nurmi (1991) an individual's motivations, interests, and their goals, influence future orientation. Having future clarity has been found to be positively associated with mindfulness and also future orientation (Moss, Wilson, Irons, & Naivalu, 2017). Generally, students who are happy and optimistic about the future tend to be more successful in college compared to those with lower well-being and future orientation.

Limitations in Previous Studies

Despite growing research on stress and trauma among college students, there have been few studies conducted that measure stress, past trauma, well-being, and future orientation among rural versus non-rural college students. There are even fewer studies that focus specifically on community college students. Because community colleges are widespread, they are often more accessible for rural students. As previously mentioned by Brun, Meece, & Agger (2017), many rural students attend a community college at some point during their education career. It can be challenging to collect data on community college students because most community colleges do not have research departments, nor do they have resources available to conduct large scale research projects.

The Current Study

The current study measured perceived stress, past trauma, well-being, and future orientation among community college students. It specifically tested whether rural college students had higher perceived stress and past trauma in comparison to non-rural students. It also tested whether rural college students would have lower well-being and score lower on measures of future orientation. The same variables were also tested by sex, race, first generation college student status, and income.

Hypotheses

H1a. Rural college students will perceive having greater levels of stress and lower levels of well-being than non-rural college students.

H1b. Females will perceive having greater levels of stress and lower levels of well-being than males.

H1c. First generation college students will perceive having greater levels of stress and lower levels of well-being than non-first generation college students.

H1d. Minority students will perceive having greater levels of stress and lower levels of well-being than European American students.

H1e. Low-income students will perceive having greater levels of stress and lower levels of well-being than higher-income students.

H2a. Rural college students are expected to be more likely to have experienced trauma than non-rural students.

H2b. Female students are expected to be more likely to have experienced trauma than male students.

H2c. First generation college students are expected to be more likely to have experienced trauma than non-first generation college students.

H2d. Minority college students are expected to be more likely to have experience trauma than European American college students.

H2e. Low-income students are expected to be more likely to have experienced trauma than higher-income students.

H3a. Rural college students will report being more fearful and less hopeful about their future than non-rural college students.

H3b. Female college students will report being less hopeful and more fearful about their future than male students.

H3c. First generation college students will report being less hopeful and more fearful about the future than non-first generation college students.

H3d. European American college students will report being more hopeful and less fearful about their future than minority students.

H3e. Low-income college students will report being more fearful and less hopeful about their future than higher-income college students.

Method

Study Design

A cross-sectional design was used for this investigation. The study was approved by the University of Kentucky Institutional Review Board and Kentucky Community & Technical College System Institutional Review Board. The anonymous and voluntary survey was sent by email to students enrolled in a class within the Kentucky Community & Technical System. Student emails were obtained through an open records request. Participants were given the option to participate in a drawing for an e-gift card if they decided to participate in the study.

Sample

Participants for this study were undergraduate college students, over age 18, enrolled in the Kentucky Community & Technical College System, located in the Southeast region of the United States. The Kentucky Community & Technical College System is made up of 16 individual colleges throughout Kentucky. In Fall of 2020, there were 70,233 students enrolled, 58.8% were female and 39.6% male (Kentucky Community & Technical College Fast Facts, 2021). Enrolled students were 78% European American, 8.4% African American, 5.2% Latino/Hispanic, 1.6 % Asian, .2 % Native American, and 3.5% two or more races (KCTCS Fast Facts, 2020).

Survey data were collected from 562 students enrolled for spring 2020, using Qualtrics (see Appendix F). Partial surveys were excluded, leaving a final sample of 412 participants. All data analyses were completed in IBM SPSS Statistics 27.

Measures

Demographics. Participants provided information on their age, sex, race and ethnicity, parental education, relationship status, living arrangements, whether they resided in a rural community or a non-rural one (city or urban, or suburban), location of nearest college, access to computer and internet, GPA, academic aspirations, and employment status. Demographic data is provided below in Table 1:

Table 1

Demographic Characteristics of Sample (N = *412*)		*N*	*%*
Age			
	18 – 20 years	161	39
	21 – 25 years	66	16
	26 – 30 years	60	15
	Over age 30	125	30
Sex			
	Male	89	22
	Female	323	78
Highest education completed by father/stepfather			
	Does not apply	64	15.5
	Finished elementary or junior high (through 9th grade)	75	18.5
	Finished high school (through 12th grade)	156	37.9
	Finished some college or technical school	80	19.4
	Finished college (4 years)	26	6.3
	Finished graduated degree	11	2.7
Highest education completed by mother/stepmother			
	Does not apply	35	8.5
	Finished elementary or junior high (through 9th grade)	59	14.3
	Finished high school (through 12th grade)	135	32.8
	Finished some college or technical school	110	26.7
	Finished college (4 years)	47	11.4
	Finished graduated degree	26	6.3
Community Type			
	Suburban community	62	15.2

	City or urban community	105	25.7
	Rural community	242	59.2
Living situation			
	Living with parent(s)	154	35.3
	Living alone	44	10.7
	Living with family member	37	9
	Living with roommate(s)	12	2.9
	Living with significant other	173	42.1
Relationship Status			
	Single	199	48.3
	Married	113	27.4
	Separated/Divorced	30	7.3
	Living with someone of opposite sex	65	15.8
	Living with someone of same sex	5	1.2
Family Income (US$)			
	less than $20,000	124	30.3
	$20,000 to $35,000	96	23.5
	$35,001 to $60,000	114	27.9
	$60,001 to $100,000	56	13.7
	more than $100,000	19	4.6
Student Individual Income			
	less than $20,000	239	70.5
	$20,000 to $35,000	75	22.1
	$35,001 to $60,000	24	7.1
	$60,001 to $100,000	0	0
	more than $100,000	1	.3
Race/ethnicity			
	Asian American	6	1.5
	Black/African American	14	3.4
	European American	121	29.4
	Hispanic/Latino	15	3.6
	Native American or American Indian	7	1.7
	Other	249	60.4
Distances from Nearest College			
	Less than 5 miles	79	19.2
	5-15 miles	143	34.7
	16-25 miles	74	18
	26-35 miles	67	16.3
	More than 35 miles	49	11.9
Access to Public Transportation			
	Yes	131	31.9
	No	280	68.1
Reliable Transportation to Class			
	Yes	380	92.2

No	19	4.6
Access to a Computer at Residence		
Yes	391	94.9
No	21	5.1
Internet Connection at Residence		
Yes	393	94.9
No	21	4.6
Higher Education Aspirations		
Certificate	12	2.9
Associate Degree (2-year degree)	105	25.5
Bachelor's Degree (4-year degree)	166	40.4
Master's Degree	96	23.4
Ph.D./Ed.D./Juris Doctorate/Doctor of Medicine	32	7.8
Higher Education Credential Expected		
Certificate	18	4.4
Associate Degree (2-year degree)	177	43
Bachelor's Degree (4-year degree)	153	37.1
Master's Degree	48	11.7
Ph.D./Ed.D./Juris Doctorate/Doctor of Medicine	16	3.9
Importance of Getting a College Degree		
Somewhat Important	34	8.3
Important	104	25.2
Very Important	274	66.5

Note. *n* = Number of participants, *%* = Percent

Stress. The Student-life Stress Inventory was used to measure stress. The survey instrument was developed to measure stressors and the reactions to stressors (Gadzella, 1991; & Gadzella, 1994). The survey consists of 51 items in nine categories. Five categories measure types of stressors; frustrations, conflicts, pressures, changes, and self-imposed. The last four categories measure reactions to stressors; physiological, emotional, behavioral, and cognitive appraisal. Respondents were asked to rate their perceptions on a 5-point Likert scale. Internal consistency and test-retest reliability has been found to be above .75 (Gadezella, 1994; Gadzella & Baloglu, 2001).

Well-being. The construct, low well-being was measured using the short form of the Weinberger Adjustment Inventory (Weinberger, 1997). The distress scales consist of 13 items that asks students to respond to statements. Respondents were asked to rate

their perceptions for the first seven items on a 5-point Likert scale; false, somewhat false, not sure, somewhat true, and true. For the last six items, respondents were asked to respond on a 5-point Likert scale ranging from 1 to 5; almost never, not often, sometimes, often, and almost always. Previous work on a sample of adolescents indicated that the scale was reliable, namely an alpha of.91 and a 7 month test-retest reliability of .76 (Weinberger, Tublin, Ford, & Feldman, 1990) and had good construct validity (Weinberger, 1996).

Trauma. Two instruments were used to measure trauma, the Trauma History Questionnaire (Hooper, Stockton, Krupnick, & Green, 2011) and the Childhood Trauma Questionnaire (Bernstein & Fink, 1998). The Trauma History Questionnaire (THQ) consists of 24 items within two categories; crime-related events and physical and sexual. A sub-category, general disaster and trauma is located under the category, crime-related events. Respondents were asked to respond true or false. If true, respondents were asked to list number of times and approximate age. Research on studies using the psychometric properties of THQ found the instrument to be reliable in general, sound, and easily adaptable (Hooper, Stockton, Krupnick, & Green, 2011). The Childhood Trauma Questionnaire (CTQ) is a 28-item instrument that asked participants to respond to statements with the heading; *When I was growing up.* The survey is a 5-point Likert scale, with a range of from 1 to 5. A participant could choose never true, rarely true, sometimes true, often true, or very often true. A study on street youth found internal reliability coefficients ranging from .65 to .95 for the CTQ (Forde, Baron, Scher, & Stein, 2011).

Future Orientation. To measure future orientation, the Future Orientation Questionnaire (Seginer, 2009) was used. The instrument includes 26 items that ask participants to respond to statements regarding their future hopes and future fears. Respondents were asked to rate their perceptions on a 5-point Likert scale ranging from

1 “never” to 5 “every day”. Higher scores indicate the validation of the FOQ among Iranian adolescents assessed the internal consistency and found it to be moderate to high with Cronbach’s alpha ranging from .68 to .92 among categories (Hejazi, E, Nahra, Z, Moghadam, A., & Saki, S. S., 2013).

Psychometric properties of the main study variables are summarized and presented below in Table 2.

Table 2: Psychometric Properties of Main Study Variables

Scale		Items	*M*	*SD*	α
Well-being					
	Anxiety	4	3.64	.93	.78
	Depression	3	2.77	1.10	.81
	Low Self-Esteem	3	2.61	1.30	.84
	Low Well-being	3	2.46	.96	.81
Stress					
	Frustrations	7	2.55	.77	.79
	Conflict	3	2.17	.86	.86
	Pressure	3	3.47	.98	.79
	Change	3	2.95	1.08	.90
	Self-Imposed Stress	6	3.64	.65	.59
	Physiological Reactions	14	2.61	.79	.87
	Emotional Reactions	4	3.27	1.01	.81
	Behavioral Reactions	8	2.34	.73	.79
	Cognitive Reactions	2	3.27	.98	.80
Trauma					
	Emotional Abuse	5	1.94	1.07	.89
	Physical Abuse	5	1.49	.81	.86
	Sexual Abuse	5	1.44	1.01	.96
	Emotional Neglect	5	1.99	1.16	.91
	Physical Neglect	5	1.54	.81	.73
Future Hopes					
	Education	2	4.27	.83	.81
	Work and Career	3	4.05	.96	.82
	Marriage and Family	5	3.85	.92	.72
	My World or other	3	3.66	.96	.69
Future Fears					

Education	2	3.63	1.22	.90
Work and Career	3	3.74	1.13	.87
Marriage and Family	5	3.26	1.10	.72
My World or other	3	3.45	1.06	.73

Note. *M* = Mean, *SD* = Standard Deviation, *α* = Alpha

Results

H1a. Rural college students would perceive greater levels of stress and lower levels of well-being than non-rural college students. One-way analysis of variance (ANOVA) indicated no significant difference between the two groups in any of the stress or well-being measures (see Appendix A).

H1b. Females would perceive greater levels of stress and lower levels of well-being than males. One-way ANOVA indicated a significant difference in five of nine stress measures by sex. Females reported greater pressure (F (1, 410) = 5.93, $p < .05$), more self-imposed stress (F (1, 410) = 4.03, $p < .05$), higher physiological reactions (F (1, 410) = 55.17, $p < .001$), greater emotional reactions (F (1, 410) = 31.25, $p < .001$), and higher behavioral reactions (F (1, 410) = 22.25, $p < .001$), than males. There was no significant difference in well-being by sex. However, there was a significant difference in low self-esteem and anxiety by sex. Females reported lower self-esteem (F (1, 410) = 15.45, $p < .001$) and higher anxiety (F (1, 409) 21.54, $p < .001$) in comparison to males (see Appendix B).

H1c. First generation college students would perceive greater levels of stress and lower levels of well-being than non-first generation college students. One-way ANOVA indicated no significant difference between the two groups on most measures of stress or well-being. However, non-first generation students had greater self-imposed than first generation students (F (1, 410) = 5.14, $p < .05$) (see Appendix C).

H1d. Minority students would perceive greater levels of stress and lower levels of well-being than European American college students. One-way ANOVAs indicated a

significant difference in three of nine stress measures by ethnicity/race. European American students reported higher conflict (F (1, 409) = 4.33, p < .05), more behavioral reactions (F (1, 410) = 10.27, p < .005), higher cognitive reactions (F (1, 410) = 6.24, p < .001), than minority students. There were no significant differences in measures of well-being by ethnicity/race. However, a significant difference was found in low self-esteem. European American students reported significantly lower self-esteem (F (1, 410) = 6.24, p < .05) than minority students (see Appendix D).

H1e Low SES students would perceive greater levels of stress and lower levels of well-being than higher SES students. One-way ANOVA indicated a significant difference in three of nine stress measures by SES/income. Low SES students reported higher frustrations (F (1, 407) = 10.41, p < .005), more behavioral reactions (F (1, 407) = 7.73, p < .05), higher physiological reactions (F (1, 407 = 8.73, p < .005), than higher SES students. There was also a significant difference in well-being by SES. Low SES students reported lower well-being than students with higher SES (F (1, 406) = 6.70, p < .05) and had higher depression (F (1, 406) = 6.18, p < .05) than higher SES students (see Appendix E).

H2a. Rural college students were expected to be more likely to have experienced trauma than non-rural students. One-way ANOVAs indicated a significant difference in only one of five past trauma measures by rurality. Non-rural students reported higher physical abuse (F (1, 408) = 4.82, p < .05) than rural students (see Appendix A).

H2b. Female students were expected to be more likely to have experienced trauma than male students. One-way ANOVA indicated a significant difference in one of five past trauma measures. Male students reported higher physical neglect (F (1, 411) = 4.14, p < .05) than female students (see Appendix B).

H2c. First generation college students were expected to be more likely to have experienced trauma than non-first generation college students. One-way ANOVAs

indicated a significant difference in two of five past trauma measures. First generation college students reported higher emotional neglect (F (1, 406) = 5.23, $p < .05$) and higher physical neglect (F (1, 411) = 4.01, $p < .05$) non-first generation (see Appendix C).

H2d. Minority college students were expected to be more likely to have experienced trauma than European American college students. One-way ANOVAs indicated a significant difference in only one of five measures of past trauma by ethnicity/race. European American students reported greater emotional abuse (F (1, 409) = 5.48, $p < .05$) than minority students (see Appendix D).

H2e. Low SES students were expected to be more likely to have experienced trauma than higher SES students. One-way ANOVAs indicated a significant difference in four of the five measures of past trauma. Low SES students reported higher emotional abuse (F (1, 406) = 8.50, $p < .005$), higher sexual abuse (F (1, 406) = 4.80, $p < .05$), more emotional neglect (F (1, 401) = 10.97, $p < .005$), and higher physical neglect (F (1, 406) = 13.94, $p < .001$), than higher SES students (see Appendix E).

H3a. Rural college students would report being more fearful and less hopeful about their future than non-rural college students. One-way ANOVAs indicated no significant differences between the two groups in future hopes or future fears (see Appendix A).

H3b. Female college students were expected to report being less hopeful and more fearful about their future than male students. One-way ANOVAs indicated a significant difference in six of eight measures of future hopes and future fears by sex. Females were more hopeful about education (F (1, 409) = 4.86, $p < .05$) and more hopeful about marriage and family (F (1, 409) = 5.01, $p < .05$), than males. Females were also more fearful about education (F (1, 400) = 7.54, $p < .05$), more fearful about work and career (F (1, 400) = 4.05, $p < .05$), and more fearful about world or other (F (1,

398) = 8.72, p < .005) than male students. Male students, on the other hand, were more fearful about marriage and family (*F* (1, 399) = 12.30, *p* < .005) than female students (see Appendix B).

H3c. First generation college students were expected to report being less hopeful and more fearful about their future than non-first generation students. One-way ANOVAs indicated no significant differences between groups in measures of future hopes or future fears (see Appendix C).

H3d. European American college students were expected to report being more hopeful and less fearful about their future than minority college students. One-way ANOVAs indicated a significant difference in six of eight measures of future hopes and future fears by race. Minority college students were more hopeful about work and career (*F* (1, 408) = 10.59, *p* < .005), more hopeful about marriage and family (*F* (1, 409) = 7.87, *p* < .05), and also more hopeful about my world or other (*F* (1, 408) = 11.91, *p* < .005). Minority college students were more fearful about education (*F* (1, 400) = 14.96, *p* < .001), about work and career (*F* (1, 400) = 8.67, *p* < .005), and about marriage and family (*F* (1, 399) = 12.48, *p* < .001), than European American college students (see Appendix D).

H3e. Low SES college students were expected to report being more fearful and less hopeful about their future than higher SES college students. One-way ANOVAs indicated a significant difference in one of eight measures of future hopes and future fears, by SES. Low SES students were more fearful about marriage and family (*F* (1, 397) = 3.98, *p* < .05), than higher SES students (see Appendix E).

Discussion

The aim of this study was to measure stress, past trauma, well-being and future orientation, among community college students. The study tested differences by rurality, sex, 1st generation college student status, race, and income.

Rurality. Although a relationship between rurality and stress, past trauma, well-being, and future orientation was hypothesized, no statistical difference was observed. These findings are somewhat inconsistent with previous research which found students from rural areas, like Appalachia, may have difficulty adjusting to college because of the difficulty in balancing class and family obligations (Gore & Wilburn, 2010; Holley & Gardner, 2012). Results of this study do not support this hypothesis, as rural students were no more likely to be stressed, have experienced past trauma, have lower well-being and future orientation, than non-rural students. As noted previously, community colleges are widespread, making them more accessible to students in rural areas. Unlike many large universities, community college campuses are more familiar to students because they are often located within their local community. Approximately 64.5% of rural youth have attended community college during their higher education career (Byun, Meece, & Agger, 2017). Based on Bronfenbrenner's (1979) human ecological model, we can infer that perhaps because community colleges are embedded in so many communities, they are able to provide services without the student having to leave the area. Many students and employees at community colleges reside in the same community and are familiar with one another. It is possible that rural students attending colleges and universities outside of their community, have higher stress because it is an unfamiliar environment. Other factors not tested in the current study might also be able to better explain some of the observed differences in previous research, such as high rates of unemployment or rates of poverty in some rural areas.

Sex. Findings from this study support the hypothesis that women have more stress, specifically more pressure, more self-imposed stress, higher physiological reactions, greater emotional reactions, and higher behavioral reactions, than males. These results are in line with previous research that found higher stress among females (Brougham et al. 2009; ACHA, 2018). Females had lower self-esteem and higher

anxiety, but there was no difference in well-being by sex. While females report higher stress, it does not appear to affect their well-being, but may have an effect on self-esteem and anxiety. Even though females report higher stress, they often have more social support than males (Jenkins et. al., 2013). Brougham et al (2018) noted that coping varies by sex, with women using more emotion-based coping. The family stress model indicates that coping strategies can help prevent stressors from becoming a crisis with emotional support serving as a protective factor for depressive symptoms (Smith & Hammon, 2012; Levens, Elrahal, & Sagui, 2016). While females report higher levels of stress, their larger social support networks, including family emotional support, might help them to better manage and mitigate experienced stress.

First Generation College Student Status. The current study did not find a difference between first generation and non-first generation students, in most measures of stress or well-being. Non-first generation students did report greater self-imposed stress, which may be a result of pressure from parents to succeed in college.

Findings from this study does support the hypothesis that first generation students have higher past trauma, specifically emotional and physical neglect. These results support previous research that found first generation students to have experienced higher PTSD symptoms than non-first generation students (Jenkins, Belanger, Conally, Boals, & Duron, 2013). Depending on the severity of emotional and physical neglect, PTSD could result from those experiences. As stated previously, this study found that males experienced significantly more physical neglect than females. Therefore, male, first-generation college students may be at a greater risk for having experienced neglect, and have an elevated risk of PTSD or other mental health issues as a result of past neglect. Both the family stress as well as human ecological models help to illustrate the importance of supports outside of the immediate family, including mental health and educational resources. In fact, these might be instrumental in

assisting students with being able to better cope with issues related to past trauma, but also with helping them succeed in college.

Race. The current study found that European Americans had higher conflict, more behavioral reactions, and more cognitive reactions than minority students. They also had lower self-esteem and higher emotional abuse, as compared to minority students. These findings were unexpected and do not match previous research which showed non-Caucasian students having higher financial stress, being at a greater risk for PTSD, and dropping out of due to past trauma (Brougham et. al. 2009; Boyraz, Owens, Horne, & Armstrong, 2013; Boyraz et al., 2013). It seems plausible that these findings are due to the wording for the race/ethnicity question. Including the word "White" along with or in place of, European American, may have decreased the number of participants choosing "other" for race/ethnicity. In measures of future hopes and fears, minority students were more hopeful about work and career, marriage and family and about world or other. Minority students were also more fearful about education, about work and career, and marriage and family. Race in this study has given mixed results that contradict previous research and additional research is needed to better understand these findings.

SES. The findings of this study are consistent with the hypothesis suggesting that low-income students would have higher perceived stress, including more frustrations, more behavioral reactions and higher physiological reactions than higher income students. They also had lower well-being and measured higher emotional abuse, sexual abuse, and emotional and physical neglect. These findings are in line with those of previous students on the negative effects of poverty. Low-income students who are food insecure are twice as likely to experience high levels of stress and depression, compared to their peers (Bruening, Woerden, Todd, & Laska, 2018). Stress can affect both mental and physical health and lead to poor academic performance (Lee et. al.,

2013). These findings suggest that being low-income is the strongest predictor for having high stress, experiences of past trauma, and low well-being.

The family stress model and the ecological systems model together help explain these findings. Persistent poverty can lead to unwellness and maladaptive adjustment. The success of these students often depends on particular coping strategies learned from family and other support systems located outside the immediate family, including local schools or social service agencies available in the community.

Conclusion

This study found that low-income students are at the greatest risk for stress, past trauma, and low well-being compared to their higher income peers. This supports previous research on the effects of poverty and the need for resources to assist low-income students while they pursue higher education. Unfortunately, programs intended to help low-income students, such as the federal work study program, have been underfunded and poorly managed (Sara Goldrick-Rab, 2018). Low-income women and 1st generation college students may be more susceptible to elevated stress and past trauma. These students may be unable to manage stress because they lack coping strategies. Approximately 86% of the participants for this study lived with a parent, family member, or significant other. According to Bronfenbrenner's (1979) ecological systems model, family and school have the most direct impact on an individual's life. Children often learn copying strategies from their parents. Families that can adequately evaluate a stressor and respond with effective coping strategies, can prevent a crisis occurring (Smith & Hamon, 2012).

Implications

Results of this study provide important evidence that low income students are at greater risk for experiencing and reporting more stress, a greater likelihood of past trauma, and lower well-being. College services that assist students with managing stress

or other mental health issues might be able to assist students with effectively dealing with these stressors, and thus, increasing the likelihood that they succeed academically, both in levels of achievement, but also related to retention and completion.

Study findings provide some evidence that a holistic, systems approach might be most beneficial for positive student outcomes. At the microsystem level, family members, teachers, and peers have the greatest influences on individuals. Providing family support, in the form of job training for family members might be beneficial. For example, high school dual credit or apprenticeship programs provide low-income students with a number of opportunities to earn college credits or train for skills while they are still in high school. Many of these programs are free of charge and are taught at the student's high school, so transportation is not an issue. Some students also have the option to earn technical college certifications, like nurse-aid or welding. In addition to college credits, paid apprenticeship programs provide low-income high school students with income while they acquire on the job skills. Most apprenticeship positions lead to full-time employment after high school. Information about funding for job training and technical certifications can also be provided to parents, so they are aware of opportunities for themselves. These are just some of the examples of programs that presently assist low-income students and their families which could be expanded to support low income students as they appear at greatest risk for a number of problems, based on the evidence from this study.

It would also be helpful to make college professors and adjuncts aware of the many services available to such students in potential need for such services; this would permit them to make suggestions to students or at least alert them to such possibilities. At the exosystem level, educational policy as well as government agencies have the authority to put into place programs that provide services to students particularly at risk for experienced and perceived stressors associated with their background or the

communities that they reside in, known to be associated with elevated risks for trauma. These are also able to allocate financial resources to assist low-income students, for instance, known to make a substantial difference in their educational opportunities and trajectories, and thus future lives.

Limitations

There were several notable limitations for this study. The study was a cross-sectional design, with data collected at one point in time. Therefore, the present study findings cannot be used to make any causal interpretations. Having multiple assessments overtime would provide the opportunity to better understand some of the underlying mechanisms that might be in play leading to some of the observed differences that were found between groups. It is also important to note that the sample size was relatively modest and the study is based on a convenience sample, thereby further limiting potential generalizability of study findings.

Another limitation of this study was timing of the assessment. The data were collected in May of 2020, during the beginning of the COVID-19 pandemic. It is unknown what affect, if any, the pandemic had on student stress or future hopes and fears. Therefore, given the highly unusual circumstances during which the current data were collected, it is unknown the extent to which the pandemic directly affected some of the observe study findings. One way to remedy this would be to repeat the study at some time in the future to be better able to ascertain the extent to which the pandemic affected student reports. In addition, the data collection also took place near the end of the spring semester, when students begin to study for final examinations.

The findings comparing different racial/ethnic groups were a bit unexpected. In fact, a large proportion (60%) of the sample chose “other” for race/ethnicity. This was unexpected given that the population is predominately European American. It is possible that the question for race/ethnicity may have caused some confusion among participants

because they did not identify with “European American,” which was missing “White”. Thus, future work in this population should include “White” alongside European American. Lastly, like with any survey study, due to the fact that all data were collected via self-reports from study participants, there is the potential for mono-method bias. In turn, this bias may have systematically affected the observed study findings and some of the group differences.

Appendices

Appendix A

Analysis of Variance (ANOVA) by Rurality

		n	*M*	*SD*	*SE*	*F*	*p*
SSI Frustrations	Rural	241	2.54	.78	.05	.097	.755
	Suburban or	167	2.56	.76	.06		
	Urban	409	2.55	.77	.04		
	Total						
SSI Conflict	Rural	242	2.16	.87	.06	.087	.768
	Suburban or	166	2.19	.85	.07		
	Urban	408	2.17	.86	.04		
	Total						
SSI Pressure	Rural	242	3.48	.97	.06	.081	.776
	Suburban or	167	3.45	1.01	.08		
	Urban	409	3.46	.98	.05		
	Total						
SSI Change	Rural	242	2.97	1.10	.07	.410	.522
	Suburban or	167	2.90	1.06	.08		
	Urban	409	2.95	1.08	.05		
	Total						
SSI Self-Imposed Stress	Rural	242	3.61	.63	.04	1.314	.252
	Suburban or	167	3.69	.68	.05		
	Urban	409	3.64	.65	.03		
	Total						
SSI Physiological Reactions	Rural	242	2.65	.81	.05	1.310	.248
	Suburban or	167	2.56	.77	.06		
	Urban	409	2.62	.79	.04		
	Total						
SSI Emotional Reactions	Rural	242	3.26	1.00	.06	.150	.699
	Suburban or	167	3.29	1.03	.08		
	Urban	409	3.27	1.01	.05		
	Total						
SSI Behavioral Reactions	Rural	242	2.20	.69	.04	1.449	.229
	Suburban or	167	2.29	.78	.06		
	Urban	409	2.24	.73	.04		
	Total						
SSI Cognitive Reactions	Rural	242	3.32	1.04	.07	1.921	.166
	Suburban or	167	3.19	.89	.07		
	Urban	408	3.27	.98	.05		
	Total						
WAI Anxiety	Rural	241	3.64	.94	.06	.038	.845

	Suburban/Urban	167	3.62	.92	.07		
	Total	408	3.64	.93	.05		
WAI Depression	Rural	241	2.72	1.09	.07	1.660	.198
	Suburban or	167	2.86	1.10	.08		
	Urban	408	2.78	1.10	.05		
	Total						
WAI Low Self	Rural	242	2.57	1.31	.08	.877	.350
Esteem	Suburban or	167	2.70	1.28	.099		
	Urban	409	2.62	1.30	.06		
	Total						
WAI Low Well	Rural	241	2.44	.96	.06	.377	.540
Being	Suburban or	167	2.50	.95	.07		
	Urban	408	2.47	.95	.05		
	Total						
Emotional Abuse	Rural	241	1.91	1.06	.07	.701	.403
	Suburban or	167	2.00	1.09	.08		
	Urban	408	1.94	1.07	.05		
	Total						
Physical Abuse	Rural	241	1.42	.71	.05	4.820	.029*
	Suburban or	167	1.60	.92	.07		
	Urban	408	1.50	.81	.04		
	Total						
Sexual Abuse	Rural	241	1.40	.99	.06	1.058	.304
	Suburban or	167	1.50	1.03	.08		
	Urban	408	1.44	1.01	.05		
	Total						
Emotional	Rural	238	1.94	1.14	.07	1.567	.211
Neglect	Suburban or	165	2.08	1.21	.09		
	Urban	403	2.00	1.17	.06		
	Total						
Physical Neglect	Rural	241	1.50	.74	.05	2.129	.145
	Suburban or	167	1.61	.90	.07		
	Urban	408	1.54	.81	.04		
	Total						
Future Hopes	Rural	241	4.29	.81	.05	.445	.505
Education	Suburban or	167	4.24	.87	.07		
	Urban	408	4.27	.83	.04		
	Total						
Future Hopes	Rural	241	4.01	.94	.06	.893	.345
Work & Career	Suburban or	166	4.10	.99	.08		
	Urban	407	4.05	.96	.05		
	Total						

Future Hopes	Rural	241	3.79	.91	.06	2.554	.111
Marriage &	Suburban or	167	3.94	.94	.07		
Family	Urban	408	3.85	.93	.05		
	Total						
Future Hopes My	Rural	240	3.61	.92	.06	1.715	.191
world or other	Suburban or	167	3.73	.99	.08		
	Urban	407	3.66	.95	.05		
	Total						
Future Fears	Rural	237	3.57	1.23	.08	1.041	.308
Education	Suburban or	162	3.69	1.20	.09		
	Urban	399	3.62	1.22	.06		
	Total						
Future Fears	Rural	237	3.67	1.17	.08	1.707	.192
Work & Career	Suburban or	162	3.82	1.07	.08		
	Urban	399	3.73	1.13	.06		
	Total						
Future Fears	Rural	237	3.19	1.11	.07	2.234	.136
Marriage &	Suburban or	161	3.36	1.10	.09		
Family	Urban	398	3.26	1.11	.05		
	Total						
Future Fears My	Rural	237	3.45	1.09	.07	.008	.927
world or other	Suburban or	160	3.46	1.02	.08		
	Urban	397	3.45	1.06	.05		
	Total						

Note. SSI = Student Stress Inventory, WAI = Weinberger Adjustment Inventory, *n* = number of participants, *M* = Mean, *SD* = Standard Deviation, *SE* = Standard Error, *F* = F-Statistic, *p* = P-Value

*$p < 0.05$.

Appendix B

Analysis of Variance (ANOVA) by Sex

		n	*M*	*SD*	*SE*	*F*	*p*
SSI Frustrations	Male	89	2.46	.71	.08	1.357	.245
	Female	323	2.57	.78	.04		
	Total	412	2.55	.77	.04		
SSI Conflict	Male	89	2.24	.94	.10	.666	.415
	Female	322	2.16	.84	.05		
	Total	411	2.17	.86	.04		
SSI Pressure	Male	89	3.24	.97	.10	5.926	.015*
	Female	323	3.53	.98	.05		
	Total	412	3.47	.98	.05		
SSI Change	Male	89	2.75	1.05	.11	3.655	.057
	Female	323	3.00	1.08	.06		
	Total	412	2.95	1.08	.05		
SSI Self-Imposed	Male	89	3.52	.68	.07	4.034	.045*
Stress	Female	323	3.68	.64	.07		
	Total	412	3.64	.65	.03		
SSI Physiological	Male	89	2.10	.64	.07	55.171	.000*
Reactions	Female	323	2.76	.77	.04		
	Total	412	2.61	.79	.04		
SSI Emotional	Male	89	2.75	1.00	.11	31.248	.000*
Reaction	Female	323	3.41	.97	.05		
	Total	412	3.27	1.01	.05		
SSI Behavioral	Male	89	1.92	.66	.07	22.251	.000*
Reaction	Female	323	2.32	.73	.04		
	Total	412	2.24	.77	.04		
SSI Cognitive	Male	89	3.18	.97	.10	1.002	.317
Reactions	Female	323	3.30	.98	.05		
	Total	412	3.27	.98	.04		
WAI Anxiety	Male	89	3.24	.93	.10	21.542	.000*
	Female	322	3.74	.90	.05		
	Total	411	3.64	.93	.05		
WAI Depression	Male	89	2.58	1.07	.11	3.325	.069
	Female	322	2.82	1.10	.06		
	Total	411	2.77	1.10	.05		
WAI Low Self	Male	89	2.14	1.16	.123	15.452	.000*
Esteem	Female	323	2.74	1.31	.07		
	Total	412	2.61	1.30	.06		
WAI Low Well	Male	89	2.37	.94	.10	.967	.326
Being	Female	322	2.48	.96	.05		

	Total	411	2.46	.96	.05		
Emotional Abuse	Male	89	1.79	1.00	.11	2.092	.149
	Female	322	1.98	1.09	.06		
	Total	411	1.94	1.07	.05		
Physical Abuse	Male	89	.87	.09	1.39	1.147	.285
	Female	322	.79	.04	1.39		
	Total	411	.81	.04	1.42		
Sexual Abuse	Male	89	1.27	.82	.09	3.081	.080
	Female	322	1.48	1.05	.06		
	Total	411	1.44	1.01	.05		
Emotional Neglect	Male	88	2.07	1.18	.13	.533	.466
	Female	318	1.97	1.16	.07		
	Total	406	1.99	1.16	.06		
Physical Neglect	Male	89	1.69	.92	1.50	4.140	.043*
	Female	322	1.50	.77	1.41		
	Total	411	1.54	.81	1.46		
Future Hopes	Male	89	4.10	.94	.10	4.863	.028*
Education	Female	322	4.32	.79	.04		
	Total	411	4.27	.83	.04		
Future Hopes Work	Male	88	3.93	1.05	.11	1.862	.173
& Career	Female	322	4.08	.94	.05		
	Total	410	4.05	.96	.05		
Future Hopes	Male	89	3.66	1.02	.11	5.012	.026*
Marriage & Family	Female	322	3.90	.89	.05		
	Total	411	3.85	.92	.05		
Future Hopes My	Male	88	3.54	.94	.10	1.870	.172
world or other	Female	322	3.70	.96	.05		
	Total	410	3.66	.96	.05		
Future Fears	Male	85	3.31	1.27	.14	7.543	.006*
Education	Female	317	3.71	1.19	.07		
	Total	402	3.63	1.22	.06		
Future Fears Work	Male	85	3.53	1.21	.13	4.047	.045*
& Career	Female	317	3.80	1.10	.06		
	Total	402	3.74	1.13	.06		
Future Fears	Male	85	2.89	1.04	.11	12.298	.001*
Marriage & Family	Female	316	3.36	1.10	.06		
	Total	401	3.26	1.10	.06		
Future Fears My	Male	85	3.15	1.05	.11	8.716	.003*
world or other	Female	315	3.53	1.06	.06		
	Total	400	3.45	1.06	.05		

Note. SSI = Student Stress Inventory, WAI = Weinberger Adjustment Inventory, *n* = number of participants, *M* = Mean, *SD* = Standard Deviation, *SE* = Standard Error, *F* = F-Statistic, *p* = P-Value

*$p < 0.05$.

Appendix C

Analysis of Variance (ANOVA) by First Generation versus Non-First Generation College Students

		n	*M*	*SD*	*SE*	*F*	*p*
SSI Frustrations	1st Generation	323	2.55	.74	.04	.038	.846
	Non-1st	89	2.53	.85	.09		
	generation	412	2.55	.77	.04		
	Total						
SSI Conflict	1st Generation	323	2.15	.88	.05	1.367	.243
	Non-1st	88	2.27	.81	.09		
	Generation	411	2.17	.86	.04		
	Total						
SSI Pressure	1st Generation	323	3.44	.98	.05	1.261	.262
	Non-1st	89	3.57	.99	.10		
	Generation Total	412	3.47	.98	.05		
SSI Change	1st Generation	323	2.93	1.09	.06	.248	.619
	Non-1st	89	3.00	1.05	.11		
	Generation	412	2.95	1.08	.05		
	Total						
SSI Self-Imposed	1st Generation	323	3.61	.66	.04	5.142	.024*
Stress	Non-1st	89	3.78	.62	.07		
	Generation	412	3.64	.65	.03		
	Total						
SSI Physiological	1st Generation	323	2.61	.79	.04	.025	.873
Reactions	Non-1st	89	2.63	.81	.09		
	Generation	412	2.61	.79	.04		
	Total						
SSI Emotional	1st Generation	323	3.24	1.00	.06	.752	.386
Reactions	Non-1st	89	3.35	1.05	.11		
	Generation	412	3.27	1.01	.05		
	Total						
SSI Behavioral	1st Generation	323	2.25	.75	.04	.435	.510
Reactions	Non-1st	89	2.19	.66	.07		
	Generation	412	2.24	.73	.04		
	Total						
SSI Cognitive	1st Generation	323	3.25	.97	.05	.593	.442
Reactions	Non-1st	89	3.34	1.01	.11		
	Generation	412	3.27	.98	.05		
	Total						
WAI Anxiety	1st Generation	322	3.64	.94	.05	.001	.975
	Non-1st	89	3.64	.89	.09		
	Generation	411	3.64	.93	.05		

	Total						
WAI Depression	1st Generation	322	2.77	1.13	.06	.016	.899
	Non-1st	89	2.76	.96	.10		
	Generation	411	2.77	1.10	.05		
	Total						
WAI Low Self	1st Generation	323	2.61	1.31	.07	.007	.933
Esteem	Non-1st	89	2.60	1.26	.13		
	Generation	412	2.61	1.30	.06		
	Total						
WAI Low Well	1st Generation	322	2.48	.98	.05	1.051	.306
Being	Non-1st	89	2.37	.86	.09		
	Generation	411	2.46	.96	.05		
	Total						
Emotional Abuse	1st Generation	322	1.99	1.09	.06	3.185	.075
	Non-1st	89	1.76	.98	.10		
	Generation	411	1.94	1.07	.05		
	Total						
Physical Abuse	1st Generation	322	1.52	.83	.05	1.148	.285
	Non-1st	89	1.41	.72	.08		
	Generation	411	1.49	.81	.04		
	Total						
Sexual Abuse	1st Generation	322	1.48	1.06	.06	1.930	.166
	Non-1st	89	1.31	.79	.08		
	Generation	411	1.44	1.01	.05		
	Total						
Emotional	1st Generation	318	2.06	1.20	.07	5.229	.023*
Neglect	Non-1st	88	1.74	.99	.11		
	Generation	406	1.99	1.16	.06		
	Total						
Physical Neglect	1st Generation	322	1.58	.85	.05	4.008	.046*
	Non-1st	89	1.39	.62	.07		
	Generation	411	1.54	.81	.04		
	Total						
Future Hopes	1st Generation	322	4.27	.85	.05	.032	.858
Education	Non-1st	89	4.29	.78	.08		
	Generation	411	4.27	.83	.04		
	Total						
Future Hopes	1st Generation	322	4.04	.98	.05	.184	.668
Work & Career	Non-1st	88	4.09	.88	.09		
	Generation	410	4.05	.96	.05		
	Total						
Future Hopes	1st Generation	322	3.84	.94	.05	.394	.531
Marriage &	Non-1st	89	3.91	.87	.09		
Family	Generation	411	3.85	.92	.05		

	Total						
Future Hopes My world or other	1st Generation	322	3.64	.96	.05	.961	.328
	Non-1st Generation	88	3.75	.93	.10		
	Total	410	3.66	.96	.05		
Future Fears Education	1st Generation	318	3.63	1.24	.07	.000	.996
	Non-1st Generation	84	3.63	1.14	.12		
	Total	402	3.63	1.22	.06		
Future Fears Work & Career	1st Generation	318	3.76	1.11	.06	.168	.682
	Non-1st Generation	84	3.70	1.19	.13		
	Total	402	3.74	1.13	.06		
Future Fears Marriage & Family	1st Generation	318	3.27	1.11	.06	.038	.846
	Non-1st Generation	83	3.24	1.08	.12		
	Total	401	3.26	1.10	.06		
Future Fears My world or other	1st Generation	317	3.44	1.08	.06	.116	.734
	Non-1st Generation	83	3.49	1.00	.11		
	Total	400	3.45	1.06	.05		

Note. SSI = Student Stress Inventory, WAI = Weinberger Adjustment Inventory, *n* = number of participants, *M* = Mean, *SD* = Standard Deviation, *SE* = Standard Error, *F* = F-Statistic, *p* = P-Value

*$p < 0.05$.

Appendix D

Analysis of Variance (ANOVA) by Ethnicity/Race

		n	*M*	*SD*	*SE*	*F*	*p*
SSI Frustrations	European American	121	2.58	.74	.07	.315	.575
	Other	291	2.53	.78	.05		
	Total	412	2.55	.77	.04		
SSI Conflict	European American	120	2.31	.83	.08	4.334	.038*
	Other	290	2.12	.87	.05		
	Total	411	2.17	.86	.04		
SSI Pressure	European American	121	3.60	.94	.09	2.984	.085
	Other	291	3.41	.99	.06		
	Total	412	3.47	.98	.05		
SSI Change	European American	121	3.04	1.02	.09	1.423	.234
	Other	291	2.90	1.10	.06		
	Total	412	2.95	1.08	.05		
SSI Self-Imposed Stress	European American	121	3.71	.62	.06	1.758	.186
	Other	291	3.62	.66	.04		
	Total	412	3.64	.65	.03		
SSI Physiological Reactions	European American	121	2.62	.74	.07	.002	.966
	Other	291	2.61	.81	.05		
	Total	412	2.61	.79	.04		
SSI Emotional Reactions	European American	121	3.35	.99	.09	1.065	.303
	Other	291	3.23	1.02	.06		
	Total	412	3.27	1.01	.05		
SSI Behavioral Reactions	European American	121	2.41	.73	.07	10.268	.001*
	Other	291	2.16	.72	.04		
	Total	412	2.24	.73	.04		
SSI Cognitive Reactions	European American	121	3.54	.87	.08	13.348	.000*
	Other	291	3.16	1.00	.06		
	Total	412	3.27	.98	.05		
WAI Anxiety	European American	121	3.67	.92	.08	.197	.657
	Other	290	3.62	.93	.05		
	Total	411	3.64	.93	.05		
WAI Depression	European American	121	2.93	1.10	.10	3.800	.052
	Other	290	2.70	1.09	.06		
	Total	411	2.77	1.10	.05		
WAI Low Self Esteem	European American	121	2.86	1.38	.13	6.236	.013*
	Other	291	2.51	1.25	.07		
	Total	411	2.61	1.30	.06		
WAI Low Well Being	European American	121	2.55	.94	.09	1.586	.209
	Other	290	2.42	.96	.06		

	Total	411	2.46	.96	.05		
Emotional Abuse	European American	121	2.13	1.14	.10	5.475	.020*
	Other	290	1.86	1.03	.06		
	Total	411	1.92	1.07	.05		
Physical Abuse	European American	121	1.50	.80	.07	.011	.917
	Other	290	1.49	.81	.05		
	Total	411	1.49	.81	.04		
Sexual Abuse	European American	121	1.45	.99	.09	.031	.860
	Other	290	1.43	1.01	.06		
	Total	411	1.44	1.01	.05		
Emotional Neglect	European American	121	1.98	1.17	.11	.014	.905
	Other	290	1.99	1.17	.07		
	Total	411	1.99	1.16	.06		
Physical Neglect	European American	121	1.54	.82	.07	.006	.938
	Other	290	1.54	.80	.05		
	Total	411	1.54	.81	.04		
Future Hopes Education	European American	121	4.18	.89	.08	2.041	.154
	Other	290	4.31	.81	.05		
	Total	411	4.27	.83	.04		
Future Hopes Work & Career	European American	120	3.81	1.05	.10	10.588	.001*
	Other	290	4.15	.91	.05		
	Total	410	4.05	.96	.05		
Future Hopes Marriage & Family	European American	121	3.66	1.03	.09	7.872	.005*
	Other	290	3.93	.87	.05		
	Total	411	3.85	.92	.05		
Future Hopes My world or other	European American	120	3.41	.96	.09	11.913	.000*
	Other	290	3.76	.94	.06		
	Total	410	3.66	.96	.05		
Future Fears Education	European American	117	3.27	1.30	.12	14.961	.000*
	Other	285	3.77	1.15	.07		
	Total	402	3.63	1.22	.06		
Future Fears Work & Career	European American	117	3.49	1.18	.11	8.665	.003*
	Other	285	3.85	1.09	.06		
	Total	402	3.74	1.13	.06		
Future Fears Marriage & Family	European American	116	2.96	1.05	.10	12.483	.000*
	Other	285	3.38	1.10	.07		
	Total	401	3.26	1.10	.06		
Future Fears My world or other	European American	116	3.29	1.05	.10	3.757	.053
	Other	284	3.52	1.06	.06		
	Total	400	3.45	1.06	.05		

Note. SSI = Student Stress Inventory, WAI = Weinberger Adjustment Inventory, *n* = number of participants, *M* = Mean, *SD* = Standard Deviation, *SE* = Standard Error, *F* = F-Statistic, *p* = P-Value

*$p < 0.05$.

Appendix E

Analysis of Variance (ANOVA) by SES/Income

		n	*M*	*SD*	*SE*	*F*	*p*
SSI Frustrations	Less than 20k	124	2.74	.80	.07	10.407	.001*
	More than 20k	285	2.47	.74	.04		
	Total	409	2.55	.77	.04		
SSI Conflict	Less than 20k	124	2.19	.99	.09	.053	.817
	More than 20k	284	2.17	.80	.05		
	Total	408	2.17	.86	.04		
SSI Pressure	Less than 20k	124	3.41	.98	.09	.607	.436
	More than 20k	285	3.49	.98	.06		
	Total	409	3.47	.98	.05		
SSI Change	Less than 20k	124	2.98	1.13	.10	.159	.690
	More than 20k	285	2.93	1.06	.06		
	Total	409	2.95	1.08	.05		
SSI Self-Imposed	Less than 20k	124	3.60	.64	.06	.662	.417
	More than 20k	285	3.66	.66	.04		
	Total	409	3.64	.65	.03		
SSI Physiological Reactions	Less than 20k	124	2.79	.74	.07	8.728	.003*
	More than 20k	285	2.54	.80	.05		
	Total	409	2.62	.79	.04		
SSI Emotional Reactions	Less than 20k	124	3.36	.93	.08	1.442	.231
	More than 20k	285	3.23	1.04	.06		
	Total	409	3.27	1.01	.05		
SSI Behavioral Reactions	Less than 20k	124	2.39	.76	.07	7.726	.006*
	More than 20k	285	2.17	.71	.04		
	Total	409	2.24	.73	.04		
SSI Cognitive Reactions	Less than 20k	124	3.17	1.03	.09	1.613	.205
	More than 20k	285	3.31	.95	.06		
	Total	409	3.27	.98	.05		
WAI Anxiety	Less than 20k	124	3.77	.80	.07	3.263	.072
	More than 20k	284	3.59	.97	.06		
	Total	408	3.64	.93	.05		
WAI Depression	Less than 20k	124	2.99	1.04	.09	6.698	.010*
	More than 20k	284	2.68	1.11	.07		
	Total	408	2.77	1.09	.05		
WAI Low Self Esteem	Less than 20k	124	2.73	1.29	.12	1.450	.229
	More than 20k	285	2.57	2.30	.08		
	Total	409	2.62	1.30	.06		
WAI Low Well Being	Less than 20k	124	2.63	.93	.08	6.179	.013*
	More than 20k	284	2.38	.95	.06		

	Total	408	2.46	.95	.05		
Emotional Abuse	Less than 20k	122	2.18	1.12	.10	8.499	.004*
	More than 20k	281	1.84	1.04	.06		
	Total	403	1.94	1.07	.05		
Physical Abuse	Less than 20k	124	1.60	.88	.08	3.137	.077
	More than 20k	284	1.45	.77	.05		
	Total	408	1.50	.81	.04		
Sexual Abuse	Less than 20k	124	1.61	1.19	.11	4.800	.029*
	More than 20k	284	1.37	.91	.05		
	Total	408	1.44	1.01	.05		
Emotional	Less than 20k	122	2.28	1.27	.11	10.970	.001*
Neglect	More than 20k	281	1.87	1.10	.07		
	Total	403	2.00	1.17	.06		
Physical Neglect	Less than 20k	124	1.77	.86	.08	13.943	.000*
	More than 20k	284	1.45	.77	.05		
	Total	408	1.54	.81	.04		
Future Hopes	Less than 20k	124	4.28	.76	.07	.027	.870
Education	More than 20k	284	4.27	.86	.05		
	Total	408	4.27	.83	.04		
Future Hopes	Less than 20k	124	3.98	1.03	.09	1.088	.297
Work & Career	More than 20k	283	4.09	.93	.06		
	Total	407	4.05	.96	.05		
Future Hopes	Less than 20k	124	3.86	.98	.09	.013	.909
Marriage &	More than 20k	284	3.85	.90	.05		
Family	Total	408	3.86	.93	.05		
Future Hopes My	Less than 20k	124	3.63	1.01	.09	.171	.680
world or other	More than 20k	283	3.67	.93	.06		
	Total	407	3.66	.96	.05		
Future Fears	Less than 20k	123	3.72	1.14	.10	.985	.322
Education	More than 20k	277	3.59	1.25	.08		
	Total	400	3.63	1.22	.06		
Future Fears	Less than 20k	123	3.85	1.11	.10	1.614	.205
Work & Career	More than 20k	277	3.70	1.14	.07		
	Total	400	3.74	1.13	.06		
Future Fears	Less than 20k	122	3.42	1.15	.10	3.981	.047*
Marriage &	More than 20k	277	3.19	1.08	.06		
Family	Total	399	3.26	1.10	.06		
Future Fears My	Less than 20k	122	3.58	1.11	.10	2.570	.110
world or other	More than 20k	276	3.39	1.05	.06		
	Total	398	3.45	1.07	.05		

Note. SSI = Student Stress Inventory, WAI = Weinberger Adjustment Inventory, *n* = number of participants, *M* = Mean, *SD* = Standard Deviation, *SE* = Standard Error, *F* = F-Statistic, *p* = P-Value

*$p < 0.05$.

Appendix F

Demographic Questions

1. How old are you?
   18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 years or older
2. What is your sex?
   a. Male
   b. Female
3. What is your current relationship status?
   a. Single
   b. Married
   c. Separated/Divorced
   d. Living with someone of the opposite sex
   e. Living with someone of the same sex
4. Which of the following best describes your racial/ethnic background? Choose ONE that best describes you:
   a. Asian American
   b. Black or African American
   c. European American
   d. Hispanic or Latino
   e. Native American or American Indian
   f. Other
5. Which of the following "home situations" applies best to you?
   a. I live with my parent(s)
   b. I live alone
   c. I live with a family member
   d. I live with roommates/housemates
   e. I live with a significant other/partner
6. How much education does your father/stepfather or male caretaker have? (Give your BEST guess if you don't know for sure!)
   a. Does not apply
   b. He finished elementary or junior high school (through 9th grade)
   c. He finished high school (through 12th grade)
   d. He finished some college or technical school
   e. He has a college degree (4 years)
   f. He has a graduate degree (advanced degree, e.g., masters or doctorate)
7. How much education does your mother/stepmother or female caretaker have? (Give your BEST guess if you don't know for sure!)
   a. Does not apply
   b. She finished elementary or junior high school (through 9th grade)
   c. She finished high school (through 12th grade)
   d. She finished some college or technical school
   e. She has a college degree (4 years)
   f. She has a graduate degree (advanced degree, e.g., masters or doctorate)
8. How many people live in the same house as you? (including yourself)
   a. 1-2
   b. 3
   c. 4-5
   d. 6 or more

9. In what type of home do you live?
    a. Mobile home
    b. Apartment, or duplex
    c. Condo, or townhouse
    d. House
    e. Other
10. What is your occupation?
    a. Full-time college student only
    b. Part-time college student only
    c. College student and working part-time
    d. College student and working full-time
    e. College student and working multiple jobs
11. Please choose one of the following that best describes your family's total annual income:
    a. less than 20,000
    b. $20,000 to $35,000
    c. $35,001 to $60,000
    d. $60,001 to $100,000
    e. More than $100,000
12. **If working** - >Please pick one of the following that best describes your total annual income:
    a. less than $20,000
    b. $20,000 to $35,000
    c. $35,001 to $60,000
    d. $60,001 to $100,000
    e. More than $100,000
13. Which type of community do you live in?
    a. Suburban community
    b. City or urban community
    c. Rural community
14. How far do you live from the nearest college (University, Community College, or Technical College)?
    a. Less than 5 miles
    b. 5-15 miles
    c. 16-25 miles
    d. 26-35 miles
    e. More than 35 miles
15. Do you have an internet connection in your home?
    a. Yes
    b. No
16. Do you have access to a computer in your home?
    a. Yes
    b. No
17. Do you have reliable transportation to class?
    a. Yes
    b. No
18. Do you have access to public transportation (e.g. city bus)?
    a. Yes
    b. No

Academic Achievement – GPA

1. What is your current GPA?

Academic Aspirations

1. What is the highest degree that you would LIKE to get?
    a. Certificate
    b. Associate degree (2 year degree)
    c. Bachelor's degree (4 year degree)
    d. Master's degree
    e. Ph.D/Ed.D/Juris Doctorate/Doctor of Medicine

Academic Expectations

1. What is the highest degree that you EXPECT to get?
    a. Certificate
    b. Associate degree (2 year degree)
    c. Bachelor's degree (4 year degree)
    d. Master's degree
    e. Ph.D/Ed.D/Juris Doctorate/Doctor of Medicine

Academic Significance

1. How would you rate the importance of getting a college degree?
    a. Not important
    b. Somewhat important
    c. Important
    d. Very important

Student-life Stress Inventory Survey

Never	Seldom	Occasionally	Often	Most of the time
1	2	3	4	5

Stressors

As a student (frustrations):

1. I have experienced frustrations due to delays in reaching my goals.
2. I have experienced daily hassles which affected me in reaching my goals.
3. I have experienced lack of resources (money for auto, books, etc.)
4. I have experienced failures in accomplishing the goals that I set.
5. I have not been accepted socially (became a social outcast).
6. I have experienced dating frustrations.
7. I feel I was denied opportunities in spite of my qualifications.

I have experienced conflicts which were:

8. Produced by two or more desirable alternatives.
9. Produced by two or more undesirable alternatives.
10. Produced when a goal had both positive and negative alternatives

I experienced pressures:

11. As a result of competition (on grades, work, relationships with spouse and/or friends).
12. Due to deadlines (papers due, payments to be made, etc.).
13. Due to an overload (attempting too many things at one time).

I have experienced (changes):

14. Rapid unpleasant changes.
15. Too many changes occurring at the same time.
16. Change which disrupted my life and/or goals.

As a person (self-imposed):

17. I like to compete and win.
18. I like to be noticed and be loved by all.
19. I worry a lot about everything and everybody.
20. I have a tendency to procrastinate (put off things that have to be done).
21. I feel I must find a perfect solution to the problems I undertake.
22. I worry and get anxious about taking tests.

Reactions to Stressors

During stressful situations, I have experienced the following (physiological):

23. Sweating (sweaty palms, etc.).
24. Stuttering (not being able to speak clearly).
25. Trembling (being nervous, biting fingernails, etc.).
26. Rapid movements (moving quickly, from place to place).
27. Exhaustion (worn out, burned out).
28. Irritable bowels, peptic ulcers, etc.
29. Asthma, bronchial spasm, hyperventilation.
30. Backaches, muscle tightness (cramps), teeth-grinding.
31. Hives, skin itching, allergies.
32. Migraine headaches, hypertension, rapid heartbeat.
33. Arthritis, all-over pains.
34. Viruses, cold, flu.
35. Weight loss (can't eat).
36. Weight gain (eat a lot).

When under stressful situations, I have experienced (emotional):

37. Fear, anxiety, worry.
38. Anger.
39. Guilt.
40. Grief, depression.

When under stressful situations, I have (behavioral):

41. Cried.
42. Abused others (verbally and/or physically).
43. Abused self (used drugs, etc.).
44. Smoked excessively.
45. Was irritable towards others.
46. Attempted suicide.
47. Used defense mechanisms.
48. Separated myself from others.

With reference to stressful situations, I have (cognitive appraisal):

49. Thought about and analyzed how stressful the situations were.

50. Thought and analyzed whether the strategies I used were most effective.

Specific Stressors, Transportation and Internet

Never	Seldom	Occasionally	Often	Most of the time
1	2	3	4	5

1. As a student, I have experienced lack of transportation to class.
2. As a student, I have experienced frustrations due to not being able to find a ride to class.
3. As a student, I have experienced lack of access to internet at home which affected me in reaching my educational goals.
4. As a student, I have experienced frustrations due to being unable to finish my assignments due to lack of internet access.

Weinberger Adjustment Inventory (WAI)

1	2	3	4	5
False	Somewhat false	Not sure	Somewhat true	True

9. I'm not very sure of myself.
15. I usually think of myself as a happy person.
21. I really don't like myself very much.
27. I sometimes feel so bad about myself that I wish I were somebody else.
34. I'm the kind of person who has a lot of fun.
38. I worry too much about things that aren't important.
42. I often feel sad or unhappy.

1	2	3	4	5
Almost never	Not often	Sometimes	Often	Almost always

58. I feel very happy.
69. I feel so down and unhappy that nothing makes me feel much better.
70. In recent years, I have felt more nervous or worried about things than I have needed to.
74. I feel afraid something terrible might happen to me or somebody I care about.
78. I feel nervous or afraid that things won't work out the way I would like them to.
82. I feel lonely.

Trauma History Questionnaire

	Choose	If yes, please

Crime-Related Events	one		indicate	
			Number of Times	Approximate age(s)
1. Has anyone ever tried to take something directly from you by using force or the threat of force, such as a stick-up or mugging?	No	Yes	Open ended	
2 Has anyone ever attempted to rob you or actually robbed you (i.e., stolen your personal belongings)?	No	Yes	Open ended	
3 Have you ever received news of a serious injury, life-threatening illness, or unexpected death of someone close to you?	No	Yes	Open Ended	
4 Have you ever had to engage in combat while in military service in an official or unofficial war zone?	No	Yes	Open Ended	
Physical and Sexual Experiences	Choose one		If yes, please indicate	
			Number of Times	Approximate age(s)
5 Has anyone ever made you have intercourse or oral or anal sex against your will?	No	Yes	Open Ended	
6 Has anyone ever touched private parts of your body, or made you touch theirs, under force or threat?	No	Yes	Open Ended	
7 Other than incidents mentioned above, have there been any other situations in which another person tried to force you to have an unwanted sexual contact?	No	Yes	Open Ended	
8 Has anyone, including family members or friends, ever attacked you with a gun, knife, or some other weapon?	No	Yes	Open Ended	
9 Has anyone, including family members or friends, ever attacked you without a weapon and seriously injured you?	No	Yes	Open Ended	
10 Has anyone in your family ever beaten, spanked, or pushed you hard enough to cause injury?	No	Yes	Open Ended	
11 Have you experienced any other extraordinarily stressful situation or event that is not covered above?	No	Yes	Open Ended	

Childhood Trauma Questionnaire (CTQ)

Please indicate how much you agree with the following statements...

Never True	Rarely True	Sometimes True	Often True	Very Often True
1	2	3	4	5

When I was growing up…

1. I didn't have enough to eat.
2. I knew that there was someone to take care of me and protect me.
3. People in my family called me things like "stupid," "lazy," or "ugly."
4. My parents were too drunk or high to take care of the family.

5. There was someone in my family who helped me feel that I was important and special.
6. I had to wear dirty clothes.
7. I felt loved.
8. I thought that my parents wished I had never been born.
9. I got hit so hard by someone in my family that I had to see a doctor or go to the hospital.
10. There was nothing I wanted to change about my family.
11. People in my family hit me so hard that it left me with bruises or marks.
12. I was punished with a belt, a board, a cord, or some other hard object.
13. People in my family looked out for each other.
14. People in my family said hurtful or insulting things to me.
15. I believe that I was physically abused.
16. I had the perfect childhood.
17. I got hit or beaten so badly that it was noticed by someone like a teacher, neighbor, or doctor.
18. I felt that someone in my family hated me.
19. People in my family felt close to each other.
20. Someone tried to touch me in a sexual way, or tried to make me touch them.
21. Someone threatened to hurt me or tell lies about me unless I did something sexual with them.
22. I had the best family in the world.
23. Someone tried to make me do sexual things or watch sexual things.
24. Someone molested me.
25. I believe that I was emotionally abused.
26. There was someone to take me to the doctor if I needed it.
27. I believe that I was sexually abused.
28. My family was a source of strength and support.

My Future Hopes

Thinking about your future, how often does each of the following issues make you think **hopefully** about it? If you consider it **hopefully** every day, choose 5. If you do not think about this issue at all, choose 1. Select one of the intermediate scores if one of them describes you more accurately.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Every day

1. My education
2. My major subject in college
3. My job/occupation
4. My professional career
5. My romantic partner
6. My future spouse

7. My children
8. My financial situation (income, property, etc.)
9. What will be with me, in general
10. My country and the world
11. My parents and other family members
12. My close friend
13. Any other issue.....

My Future Fears

Thinking about your future, how often does each of the following issues make you **worry** about it? If you **worry** about it every day, choose 5. If you do not think about this issue at all, choose 1. Select one of the intermediate scores if one of them describes you more accurately.

1	2	3	4	5
Never	Rarely	Sometimes	Often	Every day

1. My education
2. My major subject in college
3. My job/occupation
4. My professional career
5. My romantic partner
6. My future spouse
7. My children
8. My financial situation (income, property, etc.)
9. What will be with me, in general
10. My country and the world
11. My parents and other family members
12. My close friend
13. Any other issue.....

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